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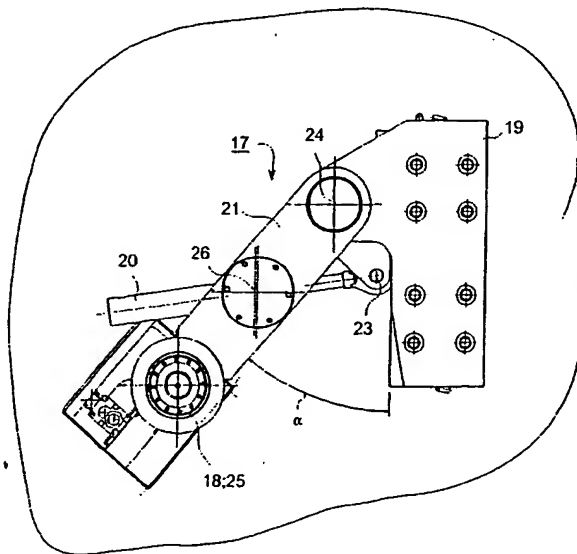
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[Continued on next page]

(54) Title: CORE LOCKING DEVICE



(57) Abstract: The invention relates to a core locking device comprising members (25) for locking the device (17) to a winding core of a roll to be wound on a two-drum winder, advantageously to a core, which device (17) is placed on a slide arranged in connection with the two-drum winder, which locking device (17) moves, as winding progresses, with the centre of the roll being formed along the slide. The device (17) comprises an actuator (20) to produce a counterforce for the force caused by the mass of the core locking device (17) in the changed position of the core locking device (17).

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A. CLASSIFICATION OF SUBJECT MATTER  
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Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,A	WO 03/089352 A (WINDO KEVIN P ;VALMET ATLAS PLC (GB)) 30 October 2003 (2003-10-30) the whole document ---	1-10
A	US 5 620 151 A (UEYAMA MINORU ET AL) 15 April 1997 (1997-04-15) the whole document ---	1-10
A	EP 0 887 293 A (VOITH SULZER FINISHING GMBH) 30 December 1998 (1998-12-30) the whole document ---	1-10
A	US 4 887 926 A (KUNZ UDO) 19 December 1989 (1989-12-19) the whole document ---	1-10
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☒ Patent family members are listed in annex.

"&" document member of the same parent family

Teija Rasch

## INTERNATIONAL SEARCH REPORT

International Application No

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## C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 841 305 A (JAGENBERG WERKE AG) 13 July 1960 (1960-07-13) the whole document ---	1-10
A	DE 40 17 732 A (GOEBEL GMBH MASCHF) . 5 December 1991 (1991-12-05) the whole document ---	1-10
A	EP 1 108 669 A (VOITH PAPER PATENT GMBH) 20 June 2001 (2001-06-20) the whole document -----	1-10

## INTERNATIONAL SEARCH REPORT

Information on patent family members

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/FI 03/00853

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03089352	A	30-10-2003	WO 03089352 A1	30-10-2003
			GB 2388106 A	05-11-2003
US 5620151	A	15-04-1997	JP 2033764 C	19-03-1996
			JP 6234444 A	23-08-1994
			JP 7053547 B	07-06-1995
			JP 2545331 B2	16-10-1996
			JP 7017659 A	20-01-1995
			JP 7024779 A	27-01-1995
			DE 4403330 A1	11-08-1994
			GB 2274835 A , B	10-08-1994
EP 0887293	A	30-12-1998	DE 19727327 A1	07-01-1999
			DE 59806149 D1	12-12-2002
			EP 0887293 A2	30-12-1998
US 4887926	A	19-12-1989	DE 3822106 C1	11-01-1990
			DE 8816525 U1	19-10-1989
			EP 0348806 A2	03-01-1990
			JP 2086526 A	27-03-1990
			JP 4076897 B	04-12-1992
GB 841305	A	13-07-1960	NONE	
DE 4017732	A	05-12-1991	DE 4017732 A1	05-12-1991
EP 1108669	A	20-06-2001	DE 19960000 A1	05-07-2001
			EP 1108669 A2	20-06-2001

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